

Fig.1

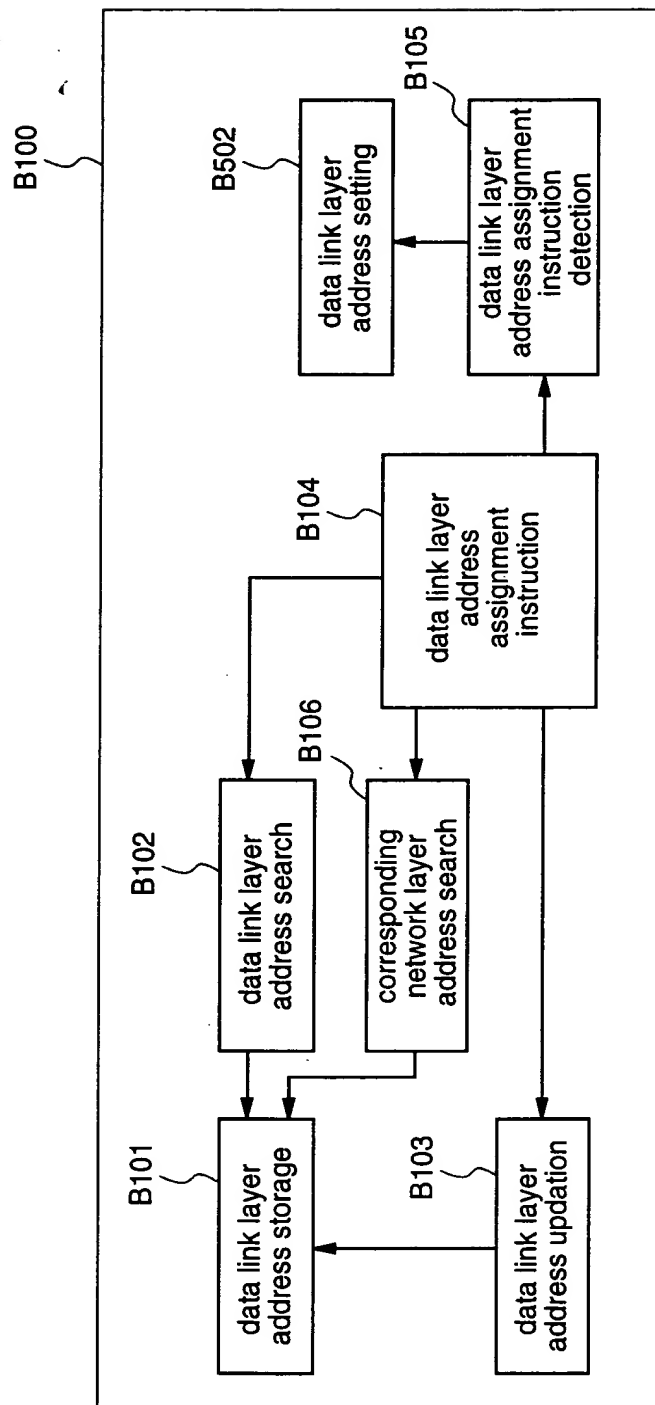


Fig.2

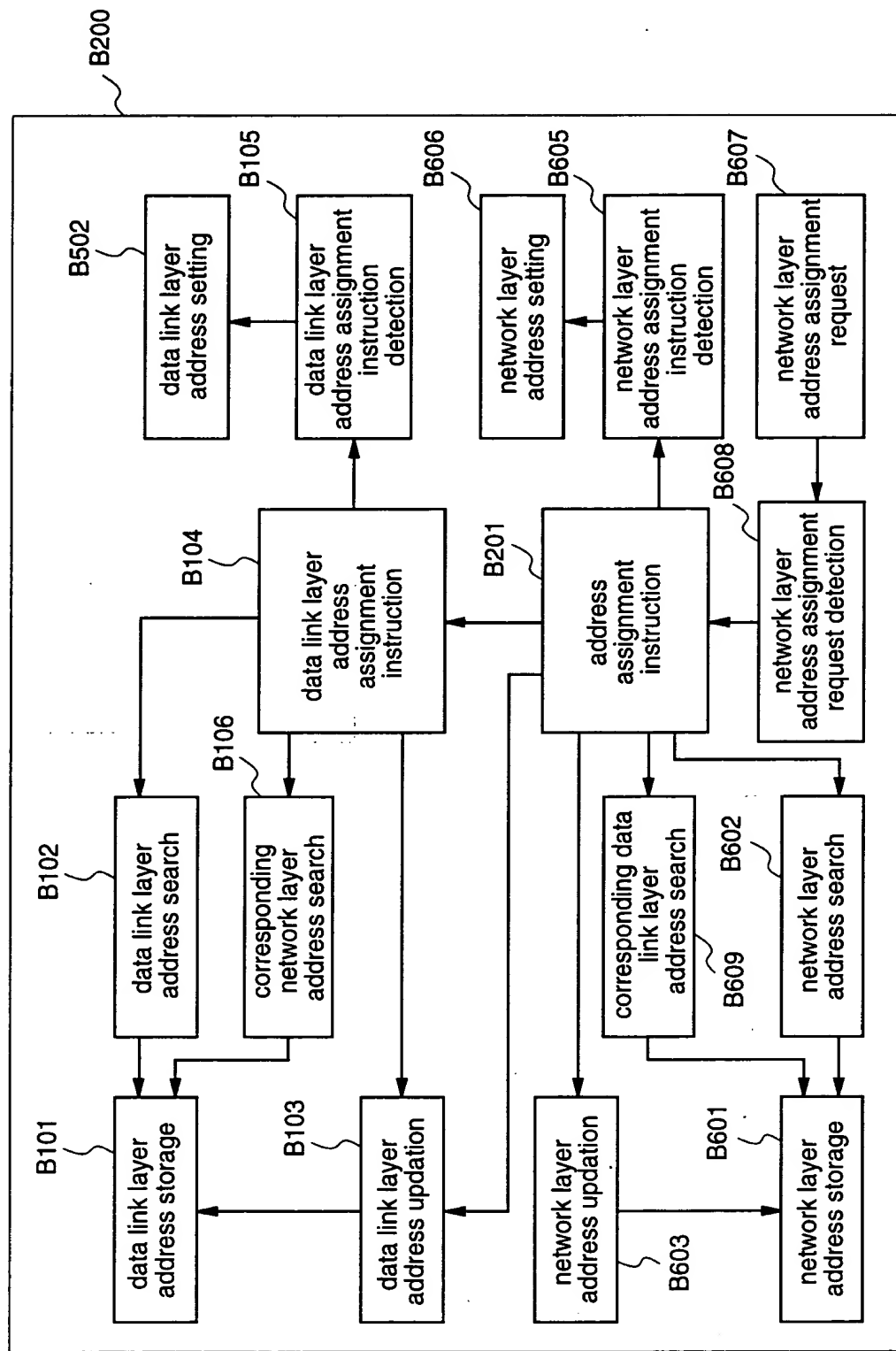


Fig.3

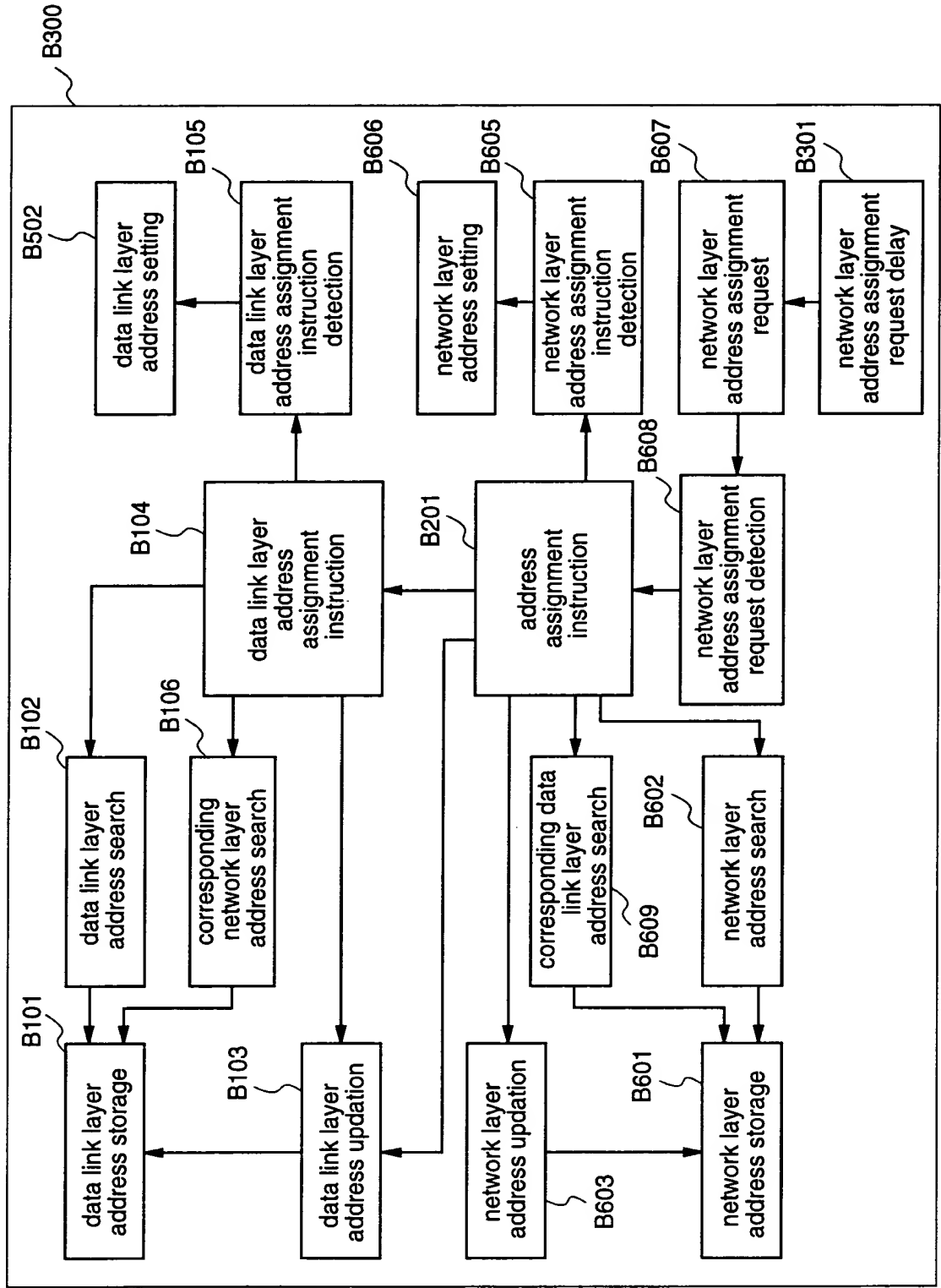


Fig.4

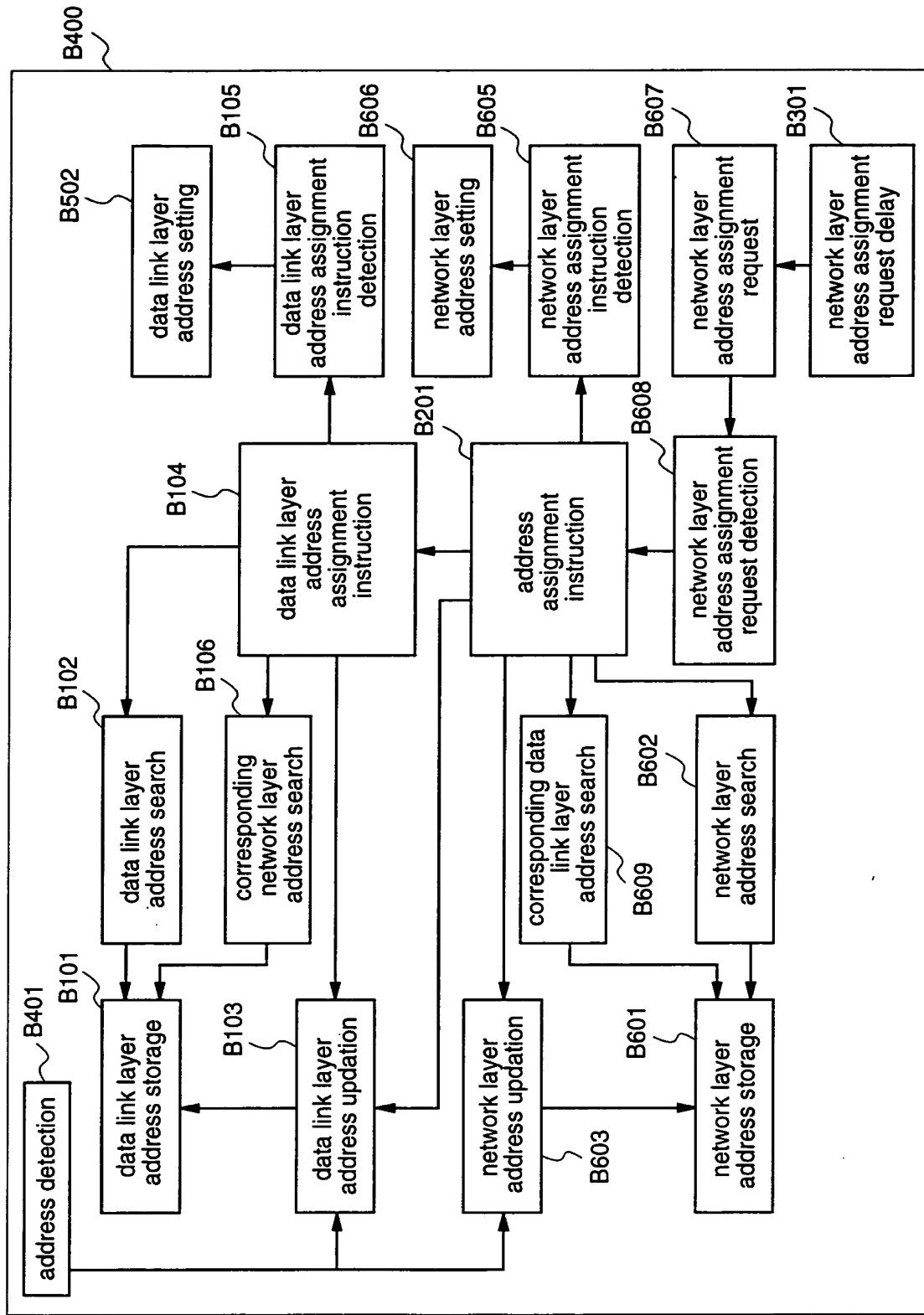


Fig.5 Prior Art

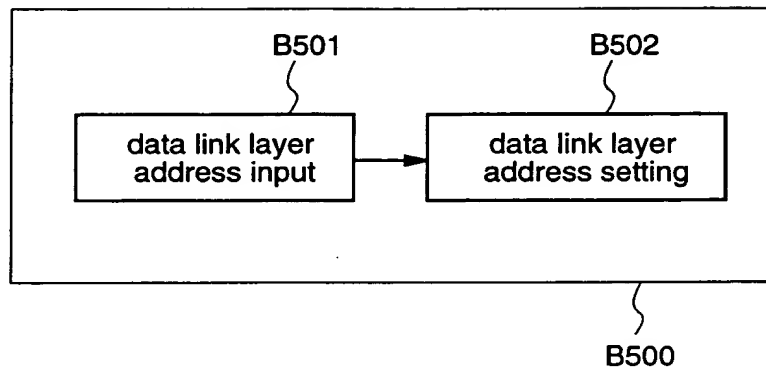


Fig.6 Prior Art

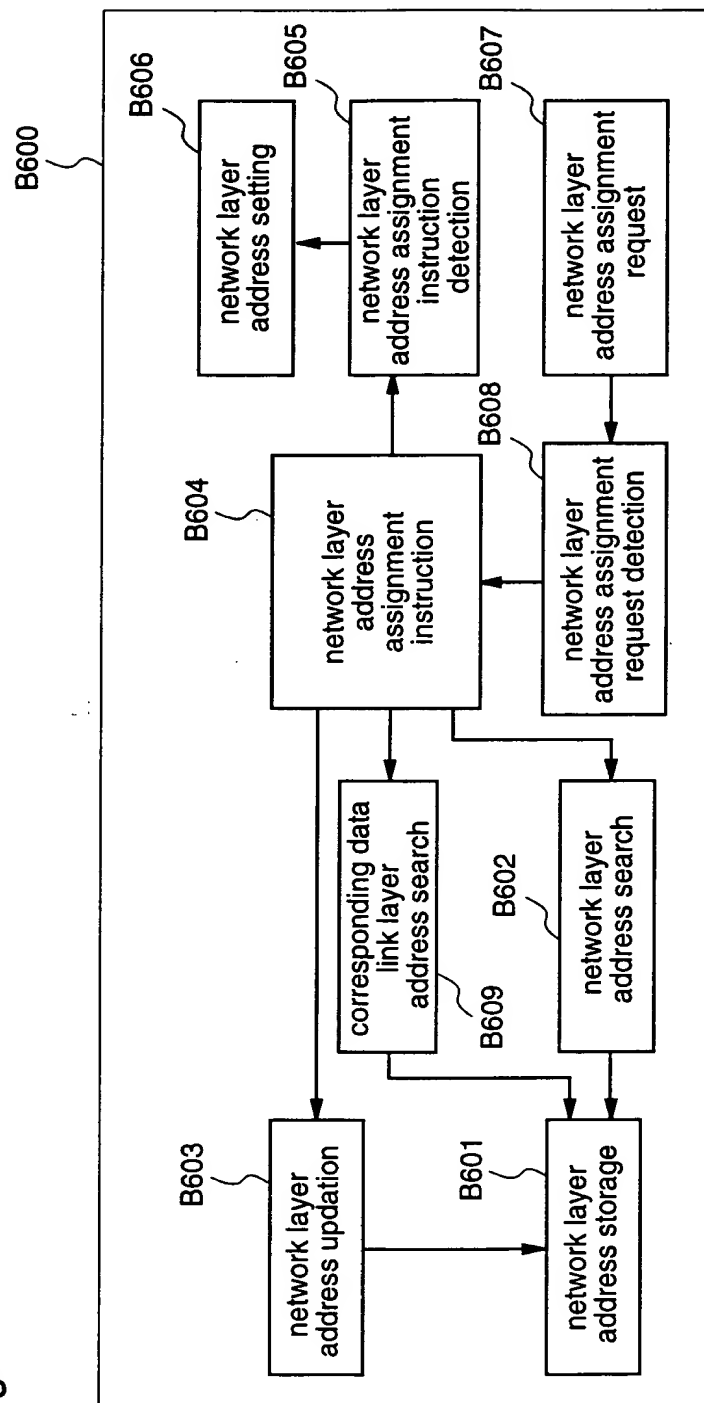


Fig.7

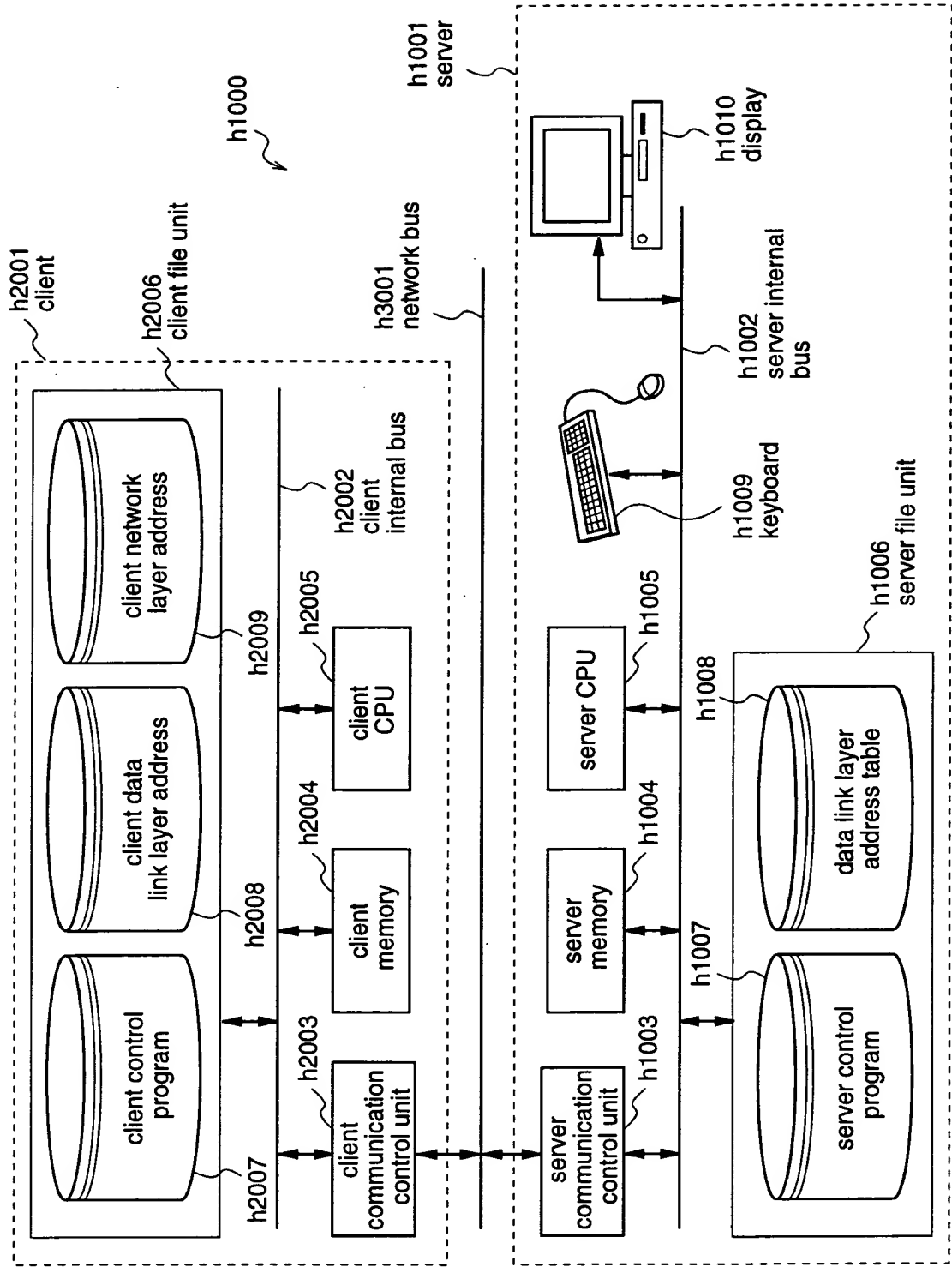


Fig.8

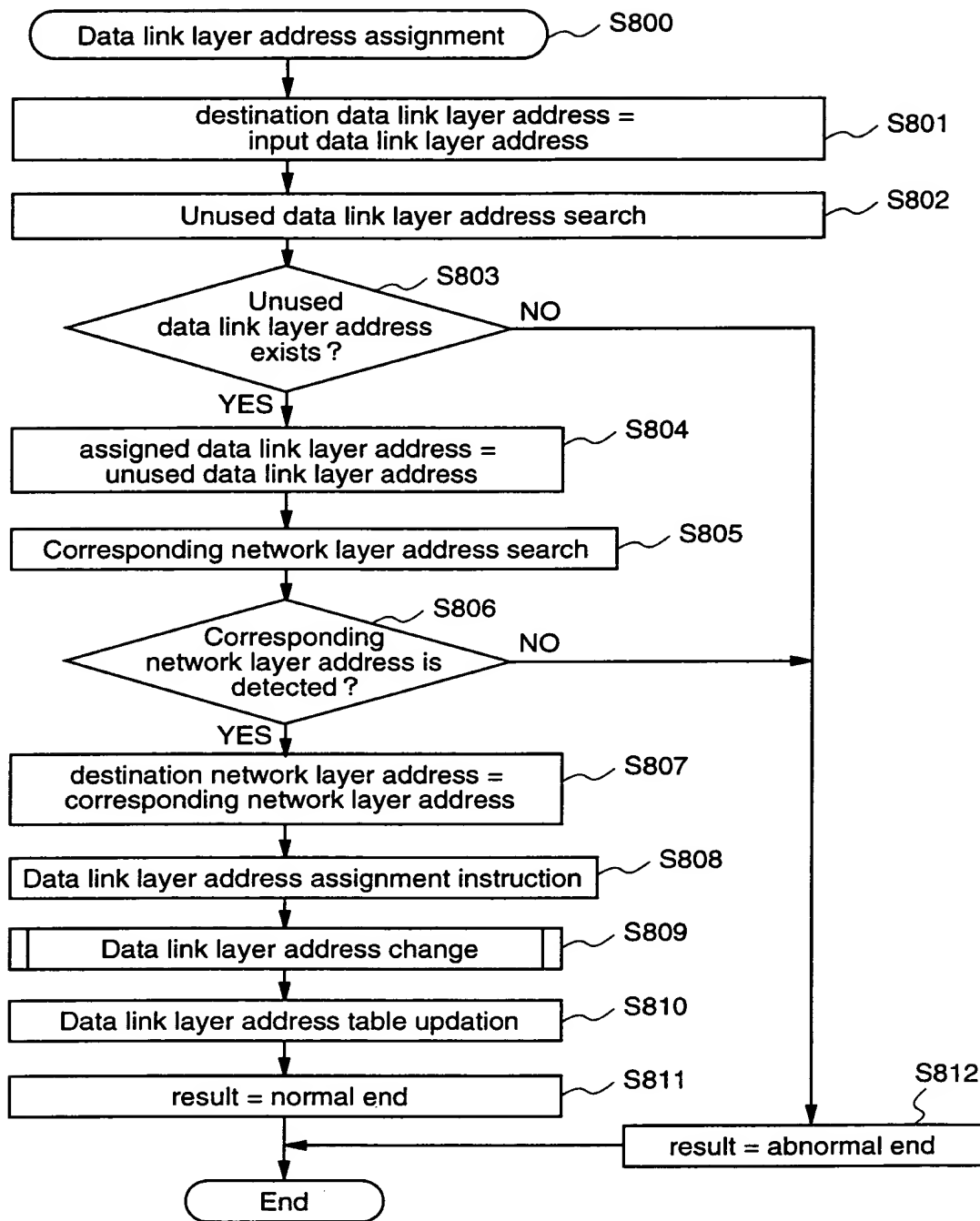


Fig.9

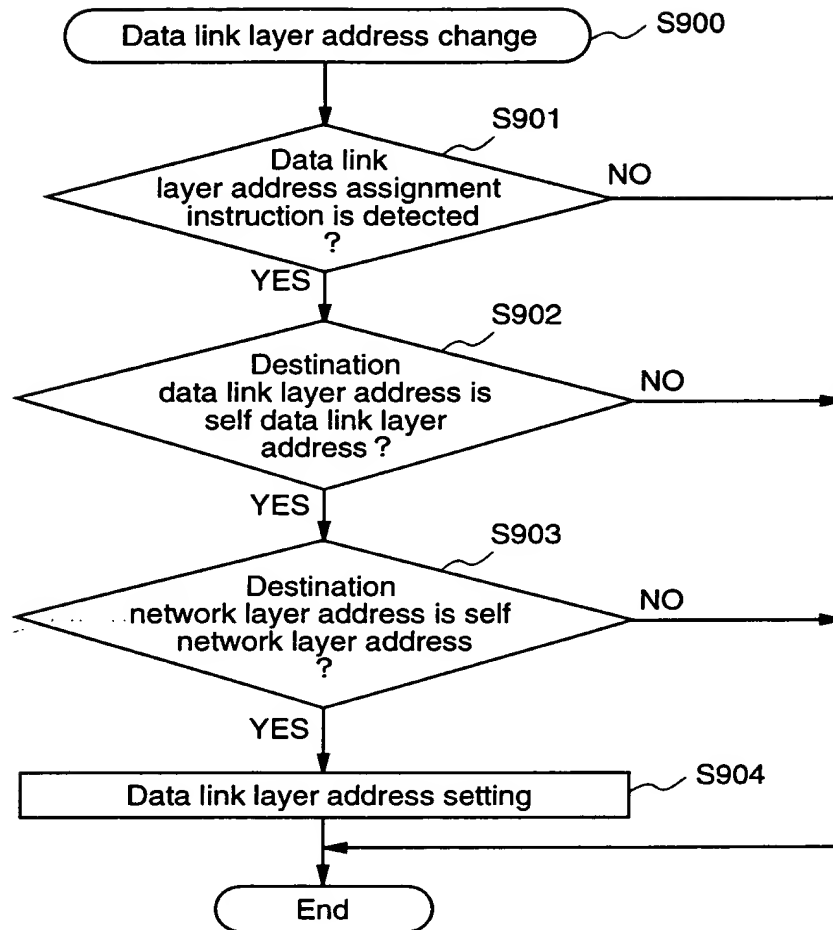


Fig.10(A)

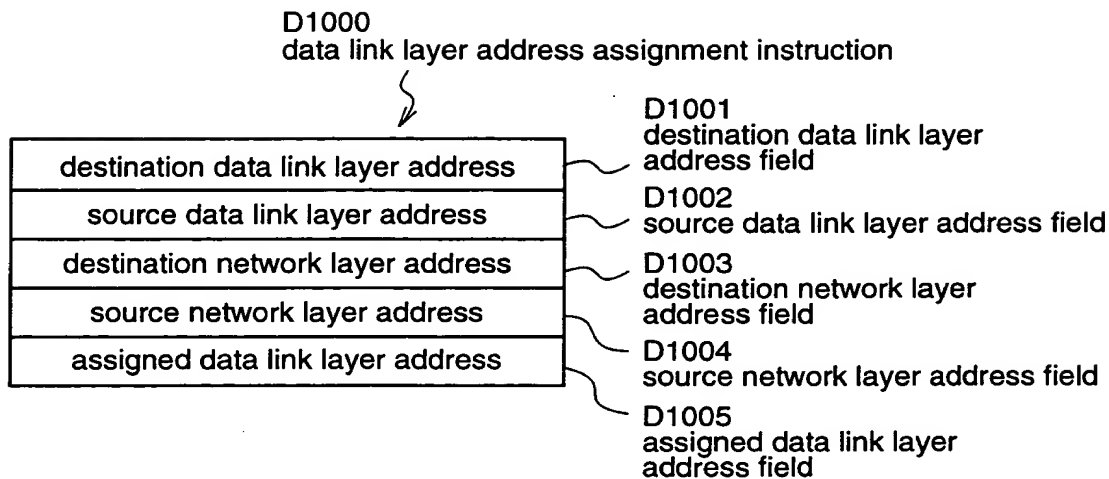


Fig.10(B)

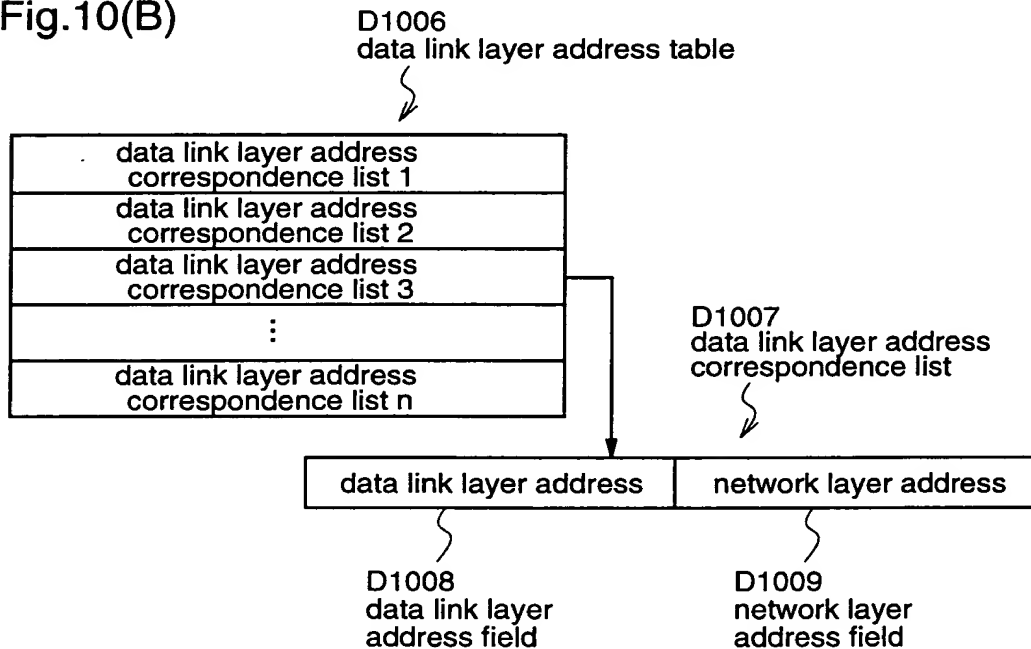


Fig.11

(a1) address state of server

network layer address	data link layer address
NA1	DA1

(a2) address state of server

network layer address	data link layer address
NA1	DA1

(b1) address state of client 1

network layer address	data link layer address
NA2	DA2

(b2) address state of client 1

network layer address	data link layer address
NA2	DA3

(d1) data link layer address table

data link layer address	network layer address
DA1	NA1
DA2	NA2
DA3	NULL
DA4	NULL

(d2) data link layer address table

data link layer address	network layer address
DA1	NA1
DA2	NULL
DA3	NA2
DA4	NULL

FIG. 12 is a block diagram of a client-server system. The client (h2001) includes a client control program (h2007), a client data link layer address (h2008), and a client network layer address (h2009). These are connected to a client internal bus (h2002) which also includes a client communication control unit (h2003), client memory (h2004), and a client CPU (h2005). The client is connected to a server (h1001) via a network bus (h3001). The server includes a server communication control unit (h1003), server memory (h1004), a server CPU (h1005), and a server internal bus (h1002). The server internal bus is connected to a server file unit (h1006) which includes a server control program (h1007), a data link layer address table (h1008), and a network layer address table (h1011). The server is also connected to a keyboard (h1009) and a display (h1010).

Fig.12

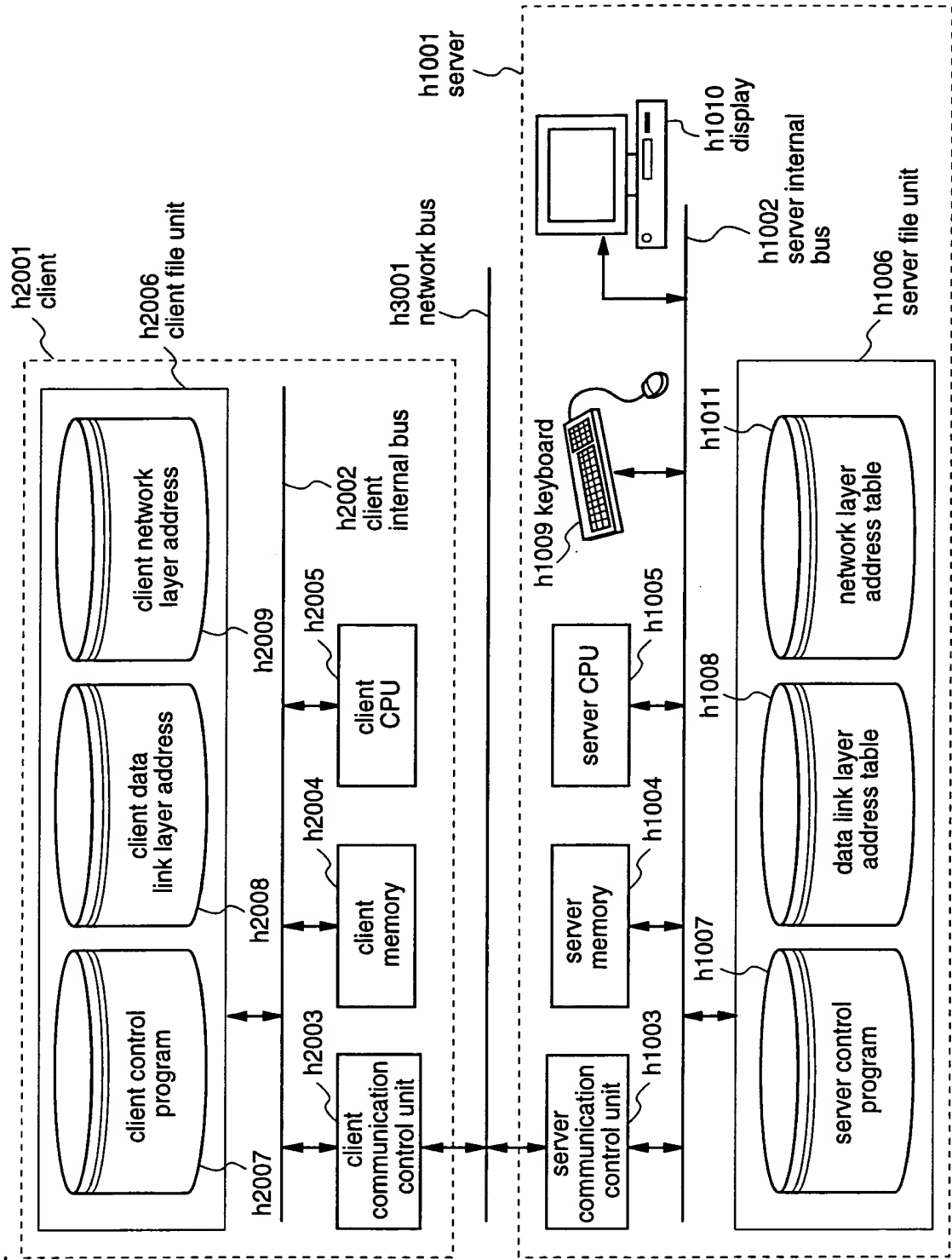


Fig.13

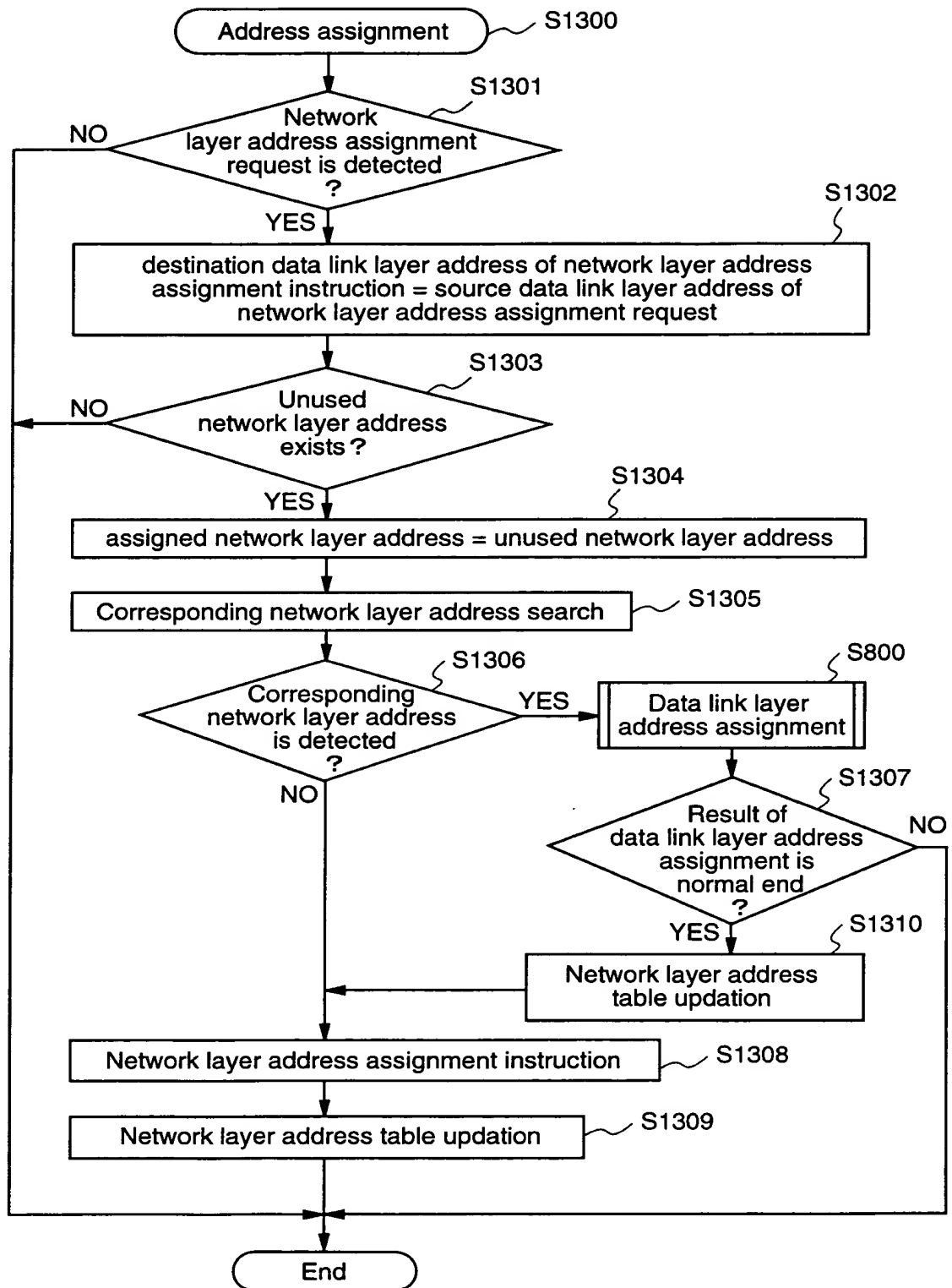


Fig.14

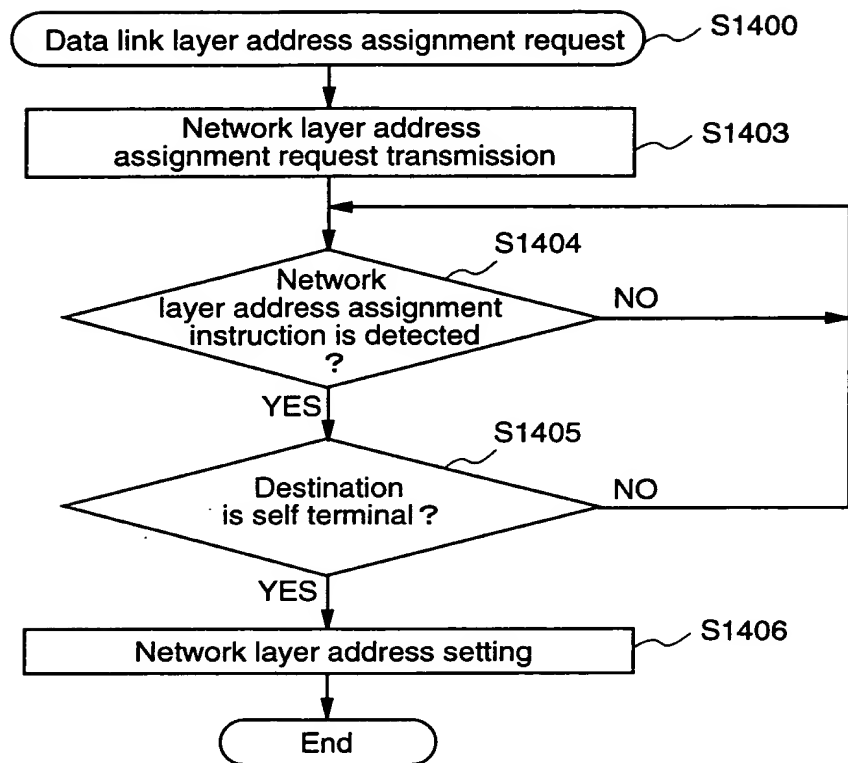


Fig.15 (A)

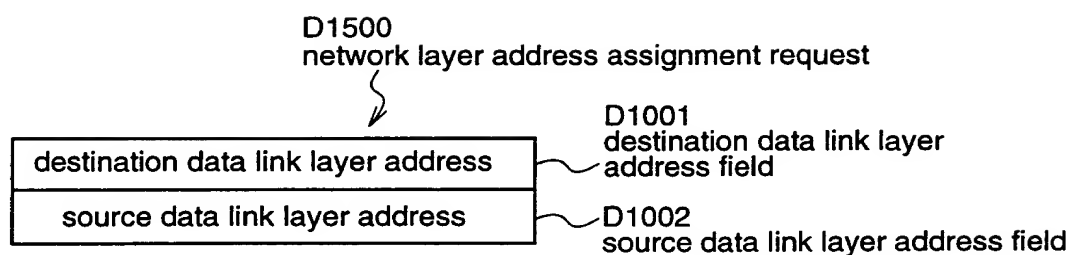


Fig.15 (B)

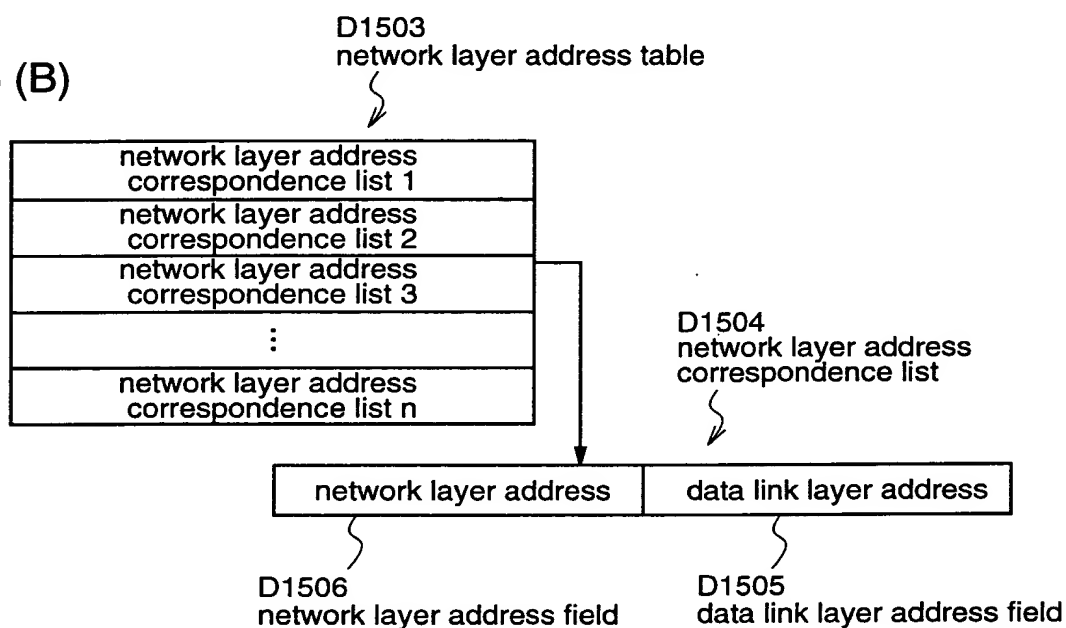


Fig.15 (C)

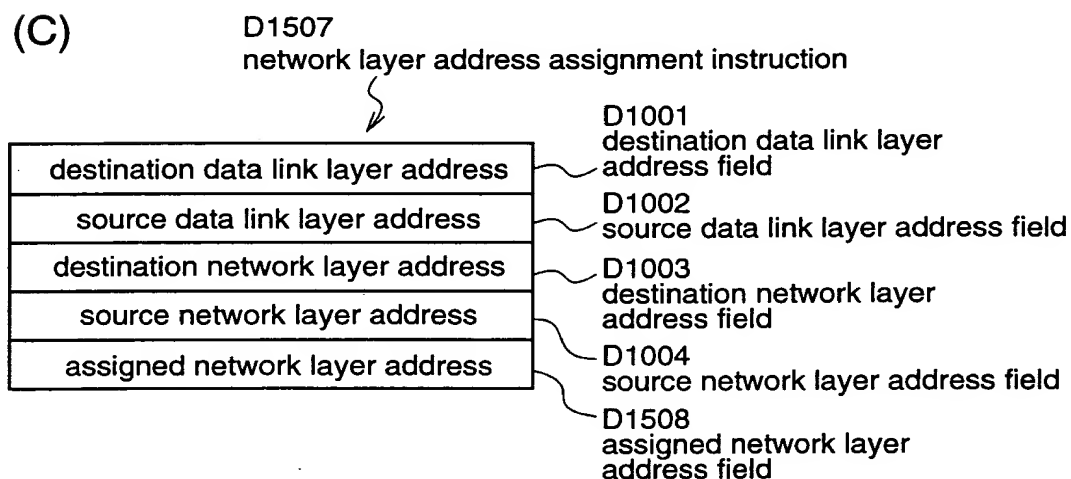


Fig.16

(a1)address state of server	(a2)address state of server	(a3)address state of server
network layer address	network layer address	network layer address
data link layer address	data link layer address	data link layer address
NA1	NA1	NA1
DA1	DA1	DA1
(b1)address state of client 1	(b2)address state of client 1	(b3)address state of client 1
network layer address	network layer address	network layer address
data link layer address	data link layer address	data link layer address
NA2	NA2	NA2
DA2	DA3	DA3
(c1)address state of client 2	(c2)address state of client 2	(c3)address state of client 2
network layer address	network layer address	network layer address
data link layer address	data link layer address	data link layer address
NULL	NULL	NA3
DA2	DA2	DA2
(d1)data link layer address table	(d2)data link layer address table	(d3)data link layer address table
data link layer address	data link layer address	data link layer address
network layer address	network layer address	network layer address
NA1	NA1	NA1
NA2	NULL	NA3
NULL	NA2	NA2
NULL	NULL	NULL
(e1)network layer address table	(e2)network layer address table	(e3)network layer address table
network layer address	network layer address	network layer address
data link layer address	data link layer address	data link layer address
NA1	NA1	NA1
NA2	NA2	DA3
NA3	NA3	NULL
NA4	NA4	NULL

Fig.17

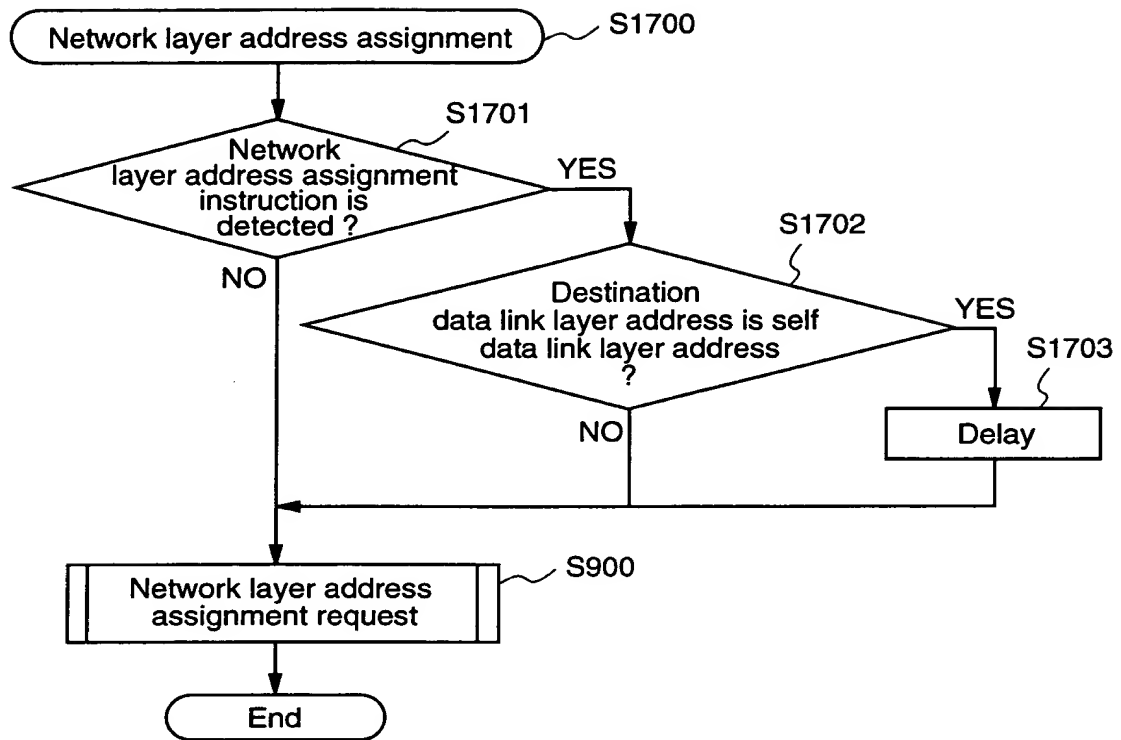


Fig.18

(a1)address state of server		(a2)address state of server		(a3)address state of server		(a4)address state of server	
network layer address	data link layer address	network layer address	data link layer address	network layer address	data link layer address	network layer address	data link layer address
NA1	DA1	NA1	DA1	NA1	DA1	NA1	DA1

(b1)address state of client 1		(b2)address state of client 1		(b3)address state of client 1		(b4)address state of client 1	
network layer address	data link layer address	network layer address	data link layer address	network layer address	data link layer address	network layer address	data link layer address
NULL	DA2	NA2	DA2	NA2	DA3	NA2	DA3

(c1)address state of client 2		(c2)address state of client 2		(c3)address state of client 2		(c4)address state of client 2	
network layer address	data link layer address	network layer address	data link layer address	network layer address	data link layer address	network layer address	data link layer address
NULL	DA2	NULL	DA2	NULL	DA2	NA3	DA2

(d1)data link layer address table		(d2)data link layer address table		(d3)data link layer address table		(d4)data link layer address table	
data link layer address	network layer address	data link layer address	network layer address	data link layer address	network layer address	data link layer address	network layer address
DA1	NA1	DA1	NA1	DA1	NA1	DA1	NA1
DA2	NULL	DA2	NA2	DA2	NULL	DA2	NA3
DA3	NULL	DA3	NULL	DA3	NA2	DA3	NA2
DA4	NULL	DA4	NULL	DA4	NULL	DA4	NULL

(e1)network layer address table		(e2)network layer address table		(e3)network layer address table		(e4)network layer address table	
network layer address	data link layer address	network layer address	data link layer address	network layer address	data link layer address	network layer address	data link layer address
NA1	DA1	NA1	DA1	NA1	DA1	NA1	DA1
NA2	NULL	NA2	DA2	NA2	DA3	NA2	DA3
NA3	NULL	NA3	NULL	NA3	NULL	NA3	DA2
NA4	NULL	NA4	NULL	NA4	NULL	NA4	NULL

Fig.19

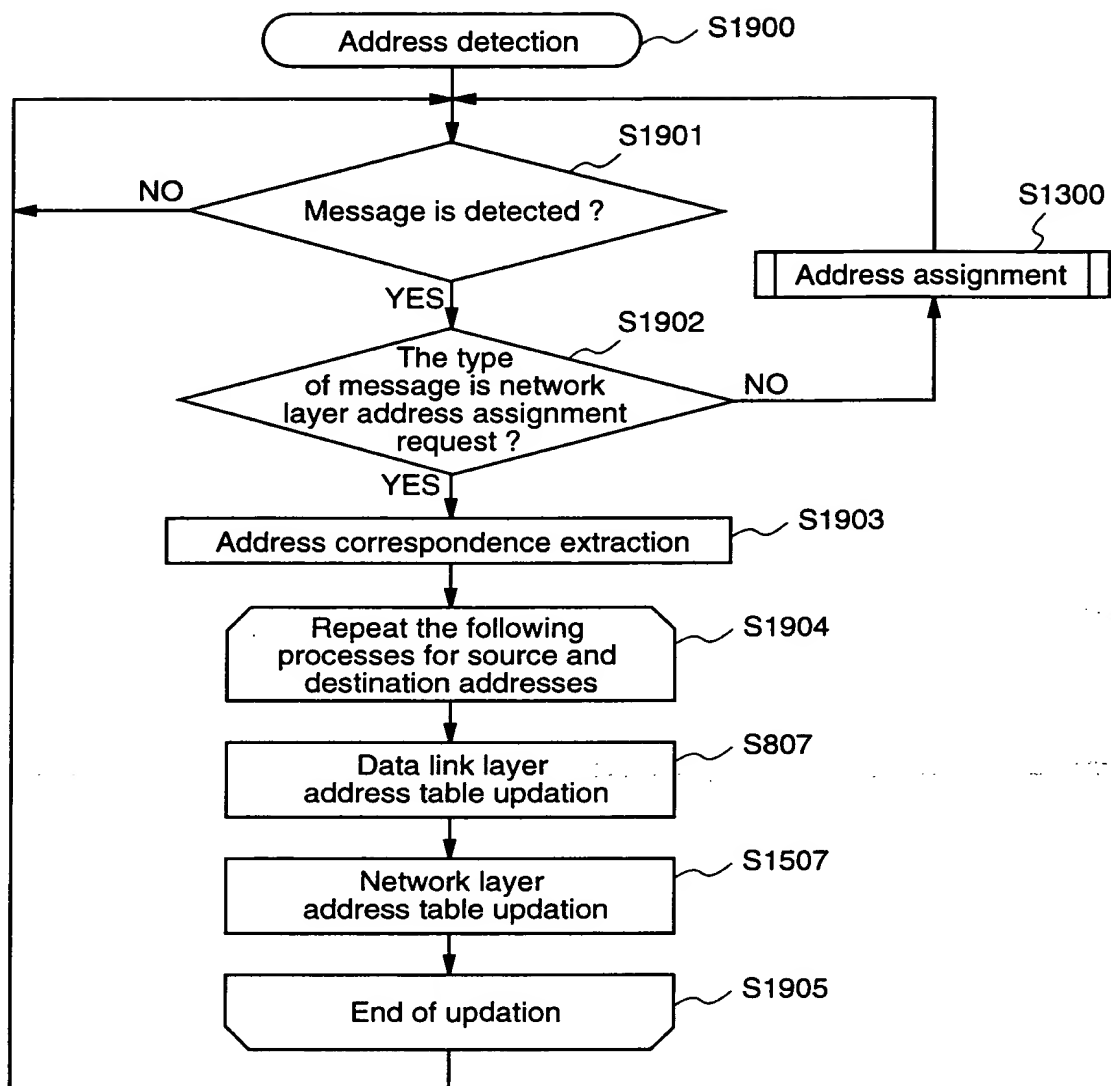


Fig.20

(a1)address state of server	(a2)address state of server	(a3)address state of server
network layer address	network layer address	network layer address
NA1	NA1	NA1
data link layer address	data link layer address	data link layer address
DA1	DA1	DA1
(b1)address state of client 1	(b2)address state of client 1	(b3)address state of client 1
network layer address	network layer address	network layer address
NA3	NA3	NA3
data link layer address	data link layer address	data link layer address
DA3	DA3	DA3
(c1)address state of client 2	(c2)address state of client 2	(c3)address state of client 2
network layer address	network layer address	network layer address
NA2	NA2	NA2
data link layer address	data link layer address	data link layer address
DA3	DA3	DA3
(d1)data link layer address table	(d2)data link layer address table	(d3)data link layer address table
data link layer address	data link layer address	data link layer address
NA1	NA1	NA1
NA2	NA2	NULL
NULL	NA3	NA2
NULL	NULL	NULL
(e1)network layer address table	(e2)network layer address table	(e3)network layer address table
network layer address	network layer address	network layer address
NA1	NA1	NA1
NA2	NA2	DA3
NA3	NA3	NULL
NA4	NA4	NULL

Fig.21 Prior Art

